ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

- **Federal Agency Name(s):** Office of Oceanic and Atmospheric Research (OAR), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce

- **Funding Opportunity Title:** Great Lakes Cooperative Institute

- **Announcement Type:** Initial Announcement

- **Funding Opportunity Number**: OAR-CIPO-2007-2000786

- **Catalog of Federal Domestic Assistance (CFDA) Number(s):** 11.432, Office of Oceanic and Atmospheric Research (OAR) Joint and Cooperative Institutes

- **Dates**: Proposals must be received by the OAR no later than 5 p.m., E.T. September 18, 2006. Proposals submitted after that date will not be considered. Applicants are strongly encouraged to apply online (http://www.grants.gov) but paper submissions are acceptable only if internet access if not available. If a hard copy application is submitted, the original and two unbound copies of the proposal should be included. Paper submissions should be sent to: NOAA, OAR, 1315 East West Highway, Room 11152, Silver Spring, Md. 20910 Attn: Dr. John Cortinas. No email or facsimile proposal submissions will be accepted.

Funding Opportunity Description: The Office of Oceanic and Atmospheric Research (OAR) invites applications for the establishment of a Great Lakes Cooperative Institute (CI). This institute will facilitate a long-term collaborative environment between NOAA and the recipient(s) within which broad-based research, prototype development, and education and outreach capabilities that focus on the priorities in the Great Lakes, can be developed and sustained. The CI will be regional in scope and will require that the CI consist of a group of research institutions with expertise and capabilities in the NOAA priority areas that contribute to the areas of research described as research themes later in this announcement.

This announcement provides guidelines for the proposed Cooperative Institute (CI) and includes details for the technical program, evaluation criteria and competitive selection

procedures. Applicants should review NOAA's CI Policy and CI Interim Handbook (both available at http://www.nrc.noaa.gov/ci) prior to preparing a proposal for this announcement.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program and Notice Objective

The purpose of this announcement is to invite the submission of proposals to establish a CI located in the Great Lakes and to provide details on the application, review and selection process. This CI will be regional in scope, giving NOAA the benefit of working with complementary capabilities at a group of research institutions that contribute to research, prototype development, and education and outreach capabilities that focus on the NOAA priorities in the Great Lakes.

CI Concept/Program Background

A Cooperative Institute (CI) is a NOAA-supported, non-federal organization that has established an outstanding research program in one or more areas that are relevant to the NOAA mission "to understand and predict changes in Earth's environment and conserve and manage coastal and marine resources to meet our Nation's economic, social, and environmental needs."
CIs are established at research institutions that also have a strong education program with established graduate degree programs in NOAA-related sciences. The CI provides significant coordination of resources among all non-government partners and promotes the involvement of students and postdoctoral scientists in NOAA-funded research. The CI provides mutual benefits with value provided by all parties.

NOAA establishes a new CI competitively when it identifies a need to sponsor a long-term (5-10 years) collaborative partnership with one or more outstanding non-federal, non-profit research institutions. For NOAA, the purpose of this long-term collaborative partnership is to promote research, education, training, and outreach aligned with NOAA's mission, to obtain research capabilities that do not exist internally, and/or to expand research capacity in NOAA-related sciences to:

- conduct collaborative, long-term research that involves NOAA scientists and those at the research institution(s) from one or more scientific disciplines of interest to NOAA;

- utilize the scientific, education, and outreach expertise at the research institution(s) that, depending on NOAA's research needs, may or may not be located near a NOAA facility;
- support student participation in NOAA-related research studies; and
- strengthen or expand NOAA-related research capabilities and capacity that complements and contributes to NOAA's ability to reach its mission goals at the research institutions.

A CI will consist of research institutions that demonstrate outstanding performance within one or more established research programs in NOAA-related sciences. These institutions may include Minority Serving Institutions and universities with strong departments that can contribute to the proposed activities of the CI.

CIs conduct research under approved scientific research themes (Section I.B) and Tasks:

i. Task I. Task I activities are related to the management of the CI, as well as general education and outreach activities. This task also includes support of postdoctoral and visiting scientists conducting research that is approved by the CI Director in consultation with NOAA, and is relevant to NOAA and the CI's mission goals.

ii. Task II. Task II activities usually involve on-going direct collaboration with NOAA scientists. This collaboration typically is fostered by the collocation of federal and CI employees.

iii. Task III. Task III activities require minimal collaboration with NOAA scientists and may include research funded by other NOAA competitive grant programs.

B. Program Activities and Needs

NOAA has identified the need to establish a CI to focus on scientific research associated with the Great Lakes region in support of NOAA's Strategic Plan, NOAA's 5-year Research Plan, and NOAA's 20-year Research Vision (all documents are available at http://www.spo.noaa.gov/) and a recent regional collaboration strategy in the Great Lakes, as ordered by Executive Order (EO) 13340. The EO has identified eight areas that must be addressed to restore and maintain the Great Lakes: Aquatic Invasions, Habitat/Species, Coastal Health, Sediments, Non-Point Sources,

Toxic Pollutants, Indicators, and Sustainable Development (http://www.glrc.us/documents/GLRC_Strategy.pdf). As a partner in the Great Lakes Regional Collaboration, the CI will also collaborate with NOAA to conduct research that will enable NOAA to develop tools, support the Great Lakes Observing System, and to assist in the protection and restoration of the Great Lakes.

The scope of NOAA's work in the Great Lakes exceeds that of the regional collaboration. NOAA has many congressional mandates[1] that include issues such as impacts of climate change on Great Lakes ecosystems, protection of underwater cultural resources at NOAA's Thunder Bay National Marine Sanctuary, and providing information to assist in marine transportation such as forecasts of weather and sea conditions, navigational charting products, and water level information. Although NOAA's mission requires delivery of high quality products and services to the coastal community, the permanent federal resources to conduct research that supports these activities are limited both in number of federal personnel and the breadth and depth of disciplines available to address the complex problems facing the Great Lakes. A CI, which has access to the intellectual resources of universities in the Great Lakes' basin, is essential to fulfill NOAA's research needs in meeting its complex Great Lakes mission.

Research activities at the CI will be regional in scope and will require that the CI consist of a consortium of research institutions. The CI must have a strong education program with established graduate degree programs in NOAA-related sciences. Lastly, the CI will be expected to develop and implement mechanisms to facilitate collaborative research, education, and outreach with NOAA (e.g., post-doctoral appointments, graduate research assistantships and research appointments) and, as necessary, with the relevant state and federal agencies in the Great Lakes region. The Great Lakes Environmental Research Laboratory, (GLERL), (http://www.glerl.noaa.gov) is the primary NOAA research entity in the Great Lakes and strong collaboration with this institution and its mission is required. These collaborations may involve temporary or permanent off-site personnel assignments at Federal facilities within the region, including the GLERL in Ann Arbor, Michigan, where space for approximately 25 full-time CI employees and 25 summer fellows will be provided.

[1] 33 USC § 1268, 16 USC § 1447b, 15 USC § 1511, 16 USC § 4741, 16 USC § 4722, 16 USC § 760e, 42 USC § 7412, 15 USC § 1525, 15 USC § 1540, 15 USC § 2901, 33 USC § 2326b, 33 USC § 2706, 42 USC § 9607, 16 USC § 1451 note, Great Lakes Water Quality Agreement of 1978—amended 1987, EO 13340, U.S. Ocean Action Plan and EO 13366.

NOAA has identified activities within various NOAA programs that would benefit from a collaboration with the CI (Table 1).(For a complete description of these NOAA Programs, see http://www.ppi.noaa.gov/prog_charters.htm.)

Table 1. Activities that will benefit from research at a Great Lakes CI

NOAA Program	Activities
Ecosystem Research	Develop forecasts to predict ecological and socioeconomic impacts. Explore and characterize ecosystem health. Identify causes and consequences of changes in ecosystem health. Develop technologies and tools.
Coasts Estuaries and Oceans	Development of an integrated ocean observing system. Integrated Modeling Products.
Coastal and Marine Resources	Coordinate and better integrate the existing network of marine managed areas. Support regional collaborations with the leadership of states, localities and tribes, particularly in the Great Lakes per the President's Executive Order. Protect, restore or enhance priority coastal land and water habitats to promote healthy and productive coastal ecosystems Increase knowledge about coastal and marine ecosystems so the coastal population can make informed decisions.
Habitat	Protect habitat and NOAA Trust Resources from priority threats. Restore habitat through national or large-scale, ecosystem-based approaches.
Marine Transportation Systems	Socioeconomic impacts of port development, maritime commerce and navigation. Development of techniques and tools for improved forecasts of hazardous weather and sea conditions. Research and development for ocean mapping technologies.
Geodesy	Regional height modernization. Models and tools describing phenomena affecting accurate positioning.
NOAA Emergency Response	Research oceanographic current models to identify and help where marine debris accumulates on the surface and sea floor.

i. Ecosystem Research Program

Within the Ecosystem Research Program there are two primary research areas associated with the activities listed in Table 1 that could be addressed by a Great Lakes CI; specifically, ecosystem forecasting and oceans and human health (OHH). Ecosystem forecasting relies heavily on monitoring to describe the changing environment, understanding the ecosystem components' interactions, and modeling to translate that environment into quantifiable terms that can be predicted. These forecast activities are an important component of NOAA's ecosystem approaches to management and support a priority for ocean and coastal ecosystem management.

NOAA is the only organization in the Great Lakes region that has the capability of assessing and predicting the ecosystem changes from climate to biology and is the only agency in the Great Lakes basin that has the scientific breadth to address impacts on aquatic ecosystems due to changes in weather and climate. Since the aquatic ecosystem is physically linked to weather and climatic conditions, predicting ecosystem changes requires a large breadth of scientific disciplines that could be provided by a CI. Capitalizing on the facts that the Great Lakes show responses sooner than coastal marine systems and substantial work has already been done to model ecosystems or major components of the ecosystems, the CI will be involved with developing ecological forecasting systems for the Great Lakes.

Other activities in the Great Lakes are associated with the Ocean Action Plan, which calls for NOAA to have a major role in the development of an OHH program. In the Great Lakes, NOAA has established a Center of Excellence for Great Lakes and Human Health at GLERL. This program is focused on drinking water quality, beach closings and harmful algal blooms.

ii. Coasts Estuaries and Oceans Program

Comprehensive, integrated Earth observing systems are required to take the "pulse of the planet," observe natural scales of variability, identify perturbations and changes, put current trends into an historical framework, provide comprehensive and scientifically sound data to forecasting models, and provide a context for assessing the impact of management decisions. Presently in the Great Lakes, NOAA has water level gages, in-lake buoys, near-shore and inland meteorology stations, a coast-watch node and ship-board multidisciplinary observation capability.

Ecosystem research over the next five years will depend on the design and development of an integrated coastal observing system.

This system will expand NOAA's ability to characterize physical, chemical, and biological properties of aquatic ecosystems, and to better understand ecosystem processes and their relationship to NOAA's management responsibilities, as described in NOAA's 5-year Research Plan. The integrated coastal observing system will require engineering research and development that is focused on aquatic biological and chemical sensors, sensor platforms, networking, communication, and database management. The system will include a wide range of atmospheric measurements as well, characterizing both the physical and chemical nature of the atmospheric conditions in the Great Lakes region, where there are many critical interactions between the atmosphere and the aquatic environment (e.g., atmospheric deposition is a significant loading pathway for many contaminants, including mercury and some nutrients, to enter the aquatic environment.)

Research is also needed on stationary, automated and drifting surface and underwater platforms, which will be required to meet the data collection challenges over large spatial areas. Issues related to sensor calibration, bio-fouling, and per unit costs are barriers to extended deployment in a marine/freshwater environment and could be addressed by a CI. Stationary, automated and drifting surface and underwater platforms will be required to meet the data collection challenges over large spatial areas.

A database management approach that allows access to real-time and archived data by researchers, the public, educational institutions, and ecosystem managers must also be implemented. Ethernet-based networking equipment, deployed in an aquatic environment, will allow surface and lakebed systems to be expanded to include additional data collection nodes. The breadth of expertise and facilities needed to accomplish the development of observing systems is such that no one entity will have all the expertise necessary. The proposed CI will be able to garner the expertise from the research community to help NOAA build the observing systems needed to monitor not just physical conditions but chemical and biological conditions as well.

iii. Coastal and Marine Resources Program

NOAA promotes the health and productivity of coastal and marine ecosystems by taking a comprehensive approach to balancing protection and use of the ecosystems. In addition to management and conservation efforts, NOAA provides decision-makers with sound science, information, tools, technology and training to

facilitate effective decision-making. NOAA also increases knowledge and awareness about coastal and marine ecosystems so that the public can act as stewards of coastal and marine areas.

In its National Marine Sanctuary Program, NOAA manages and protects specially designated areas of the nation's oceans and Great Lakes for their habitats, ecological value, threatened and endangered species, and historic, archeological, recreational and esthetic resources. NOAA also supports the management of an estuarine research reserve in the Great Lakes and several state coastal management programs (e.g., Minnesota, Indiana.) The proposed CI could support these efforts by conducting long-term collaborative research in habitat characterization, remote sensing, maritime archaeology, social sciences, estuarine ecology, fisheries, and water quality and wildlife toxicology.

iv. Habitat Program

The FY07 President's Budget includes NOAA's proposed funding for a Great Lakes Habitat Restoration Office and restoration program, which will emphasize protection and restoration of NOAA trust resources at the watershed scale within the Great Lakes Areas of Concern. NOAA's Program will focus on protecting and restoring Great Lakes aquatic resources and will provide technical support for commonly occurring lake-wide problems, e.g., invasive species, contaminated sediments, the presence of persistent contaminants, and loss of high-quality fish and wildlife habitat. To accomplish this restoration, new approaches to integrate science-based restoration methods, monitoring, and ecosystem forecasting will need to be developed to create a long term sustainable result. The CI will be instrumental in providing services to develop novel scientific approaches for restoration, new and improved monitoring techniques, and appropriate ecosystem forecast methods.

With regard to invasive species, a priority threat, NOAA is tasked with prevention, monitoring, rapid response, control, and leadership. Each one of these NOAA capabilities has insufficient capacity to meet the NOAA requirements. All capabilities are under resourced in both personnel and program operations. The CI could provide expertise to help NOAA to: (1) identify and assess potential invasive species pathways and provide research to develop ballast water treatment technologies to prevent invasive species transfer; (2) develop an effective monitoring or early detection system; (3) develop new approaches for effective and efficient rapid response; (4) develop the best possible approaches to control invasive species populations; and (5) provide approaches to coordinate the research internally and externally in the above areas.

v. Marine Transportation Systems Program

A goal of NOAA's research plan is to provide improved information to mariners and shippers to reduce issues that slow or stop the movement of goods and people in the marine transportation system. The development of improved models of the Great Lakes environment that lead to better nowcasts and forecasts will provide a key component of that information that will allow ships to transit the Lakes in a safe and efficient manner. These improved models will also contribute to another NOAA research goal, which is to give a better understanding and reduce the risks of possible adverse environmental impacts of the U.S. transportation system. NOAA has recently operationalized a Great Lakes coastal forecasting system. The CI will be involved with research that will continue to expand and improve forecasts created by this system.

vi. Geodesy Program

NOAA is working with Canada and several states to conduct GPS surveys to monitor the effects of post-glacial rebound on the Great Lakes region. The effect of post-glacial rebound is similar to tilting a bowl, with water from the upper Great Lakes moving into their lower regions. The goal of this collaborative effort is to maintain accurate height relationships between U.S. and Canadian water level gauges in order to provide valuable information on how this phenomenon will affect water levels. Establishing GPS Continuously Operating Reference Stations (CORS) at water level gauges is part of this effort. A GPS survey organized under the auspices of the International Joint Commission's Great Lakes Coordinating Committee was conducted in 2005, and will provide a more complete picture of vertical change throughout the region. Updated accurate elevations from this survey are being processed, and when published will provide vital data to coastal managers, planners, local governments, and others. The proposed CI could support these efforts by providing models and tools that are necessary to implement height modernization, and by conducting collaborative research in atmospheric studies and crustal motion (such as post-glacial rebound).

vii. Emergency Response Program

Every year NOAA responds to over a thousand natural and human-induced incidents threatening life, property, and NOAA trust resources. Federal, State, and local agencies and governments in the Great Lakes region rely on NOAA support for wildfires, oil

and chemical spills, vessel groundings, search and rescue, navigation hazards, harmful algal blooms, national special security events, and other emergencies. NOAA expertise is critical to mitigate harm, provide critical information for allocation of response assets, restore adverse effects on natural resources, aid with planning and response decision-making.

In the Emergency Response Program, there are numerous activities that require additional research capabilities in the Great Lakes region, particularly those associated with understanding and monitoring lake circulation to predict the movement of potential spills and marine debris. While the problem of marine debris has been around for decades, we still know very little about the specifics of marine debris and its qualitative impacts on the environment, marine species and economic costs. Additional research and monitoring is needed to assess the adverse impacts of marine debris to assure that the appropriate measures are taken to mitigate the problems, including research to identify the origin, location, and projected movement of marine debris within the Great Lakes, U.S. navigable waters, the U.S. Exclusive Economic Zone, and the high seas.

Research Themes at the CI

Based on the NOAA program activities, the CI should possess outstanding capabilities to provide research, prototype development, and education and outreach capabilities in four research themes:

i. *Ecosystem Forecasting* –Research that leads to improved predictions of the frequency and magnitude of ecosystem processes, particularly in the Great Lakes. This research includes: monitoring and extensive use of current and past environmental, ecological and socio-economic data; large-scale environmental and ecological studies as well as focused process studies for understanding ecosystem functions and change; and model development, parameterization and verification. Predictions include: physical hazards (e.g., waves, currents, ice, fog, storms), water quantity (e.g., levels, flows), water quality, human health (e.g., beach closings, fish contaminants and harmful algal blooms), fish recruitment and productivity, and invasives, all of which will be used in planning management and response activities. Research under this theme will also identify and improve the understanding of climate change impacts and variability on ecosystems and navigation, issues. Efforts will likely be interdisciplinary in nature and involve the physical, natural, and social sciences to be

brought to bear on the complexity of people and natural systems interactions at the regional and local level.

ii. *Invasive Species Control, Impact and Assessment*—Research conducted to understand invasive species and their impacts on ecosystems, as well as to develop approaches for effective monitoring and early detection, rapid response, and control of established and potentially invasive species populations and pathways.

iii. *Great Lakes Observing System*—Research associated with the creation and use of a Great Lakes Observation System to understand and describe the present state of the Great Lakes system defined by various ecological and environmental parameters. The parameters are key to predicting the impacts that climate change, population growth along the coastal zone, natural resource use, and episodic events can have on the ecosystem. This theme includes research on system design, network communications, data integrations techniques and geospatial technologies (GIS and remote-sensing), as well as the prototype development of decision-support tools that enable improved regional ecosystem forecasting, ecosystem management and ecosystem policy decisions.

iv. *Protection and Restoration of Resources*—Research that leads to prototype development of technology, research tools, and scientific approaches to effective restoration as well as biogeographical characterizations, that will enable improvements in defining, observing, forecasting, and protecting components of protected areas and restoring habitats and populations to form healthy productive systems. Research under this theme will cover a wide range of problems from removing contaminants to providing new materials and techniques to protect underwater cultural resources, particularly in the Great Lakes.

The proposed CI should provide the flexibility needed to work on multi-disciplinary research in collaboration with NOAA's GLERL and other NOAA entities, including the Center for Sponsored Coastal Ocean Research, National Geodetic Survey, Coastal Services Center, National Weather Service Forecast Offices and Thunder Bay National Marine Sanctuary as well as the programs identified in Table I above. The range of equipment and facilities that might be provided by the CI include equipment, such as underwater remotely operated vehicles, and engineering laboratories with manufacturing capabilities to help design and construct new observing system buoys, microbiology laboratories, and a wide range of scientific expertise including such diverse

areas as physical oceanography, chemistry, aquatic biology and ecology, and atmospheric chemistry and physics.

C. Program Authority

Authorities: 15 U.S.C.313, 15 U.S.C. 1540; 15 U.S.C. 2901 et. seq., 16 U.S.C. 753a, 33 U.S.C. 883d, 33 U.S.C. 1442, 49 U.S.C. 44720 (b), 118 Stat. 71 (January 23, 2004).

II. Award Information

A. Funding Availability

NOAA expects that approximately $1-3M will be available for the CI in the first year of the award. Of this amount, at least $110,000 will be available for annual Task I base funding. Funding for subsequent years is expected to be constant throughout the period, depending on the quality of the research, the satisfactory progress in achieving the stated goals described in the proposal, continued relevance to program objectives, and the availability of funding.

B. Award Period

The award period will be five years and may be renewed for up to an additional five years based on the outcome of a peer review in the fourth year.

C. Funding Instrument

The funding instrument for this award will be a cooperative agreement since several NOAA organizations will be substantially involved in working with the CI. Examples of substantial involvement may include, but are not limited to, proposals for collaboration between NOAA scientists and a CI scientist and/or assistance by NOAA personnel in developing curricula. Because this CI will consist of more than one institution, NOAA will consider issuing a cooperative agreement to each of the member institutions, if requested in the proposal or if a determination is made by NOAA and the CI that separate awards would be in the best interest of all parties. NOAA will make the final determination of how many cooperative agreements will be issued for the CI.

D. Permits and Approvals

It is the applicant’s responsibility to ensure that all necessary

Federal, state and local government permits and approvals for the proposed work to be conducted are obtained and effective before any research begins. Permits for proposed projects can be held by any formally and substantially involved collaborator, including a NOAA collaborator, provided the collaborator is receiving or providing resources associated with this announcement and related awards. Failure to apply for and/or obtain Federal, state, and local permits, approvals, letters of agreement, or failure to provide environmental analysis, when necessary, will eliminate any further consideration of a proposed project for funding.

III. Eligibility Information

A. Eligible Applicants

Eligibility is limited to non-federal public and private non-profit universities, colleges and research institutions that offer accredited graduate level degree-granting programs in NOAA-related sciences, as described in the CI Interim Handbook located at (http://www.nrc.noaa.gov/ci/) authorized by NOAA Administrative Order 216-107.

B. Cost Sharing or Matching Requirement

To stress the collaborative nature and investment of a CI by both NOAA and the research institution, cost sharing is required. There is no minimum cost sharing requirement; however, the amount of cost sharing will be considered when determining the level of the CI's commitment under NOAA's standard evaluation criterion for overall qualifications of applicants. Acceptable cost-sharing proposals include, but are not limited to, offering a reduced indirect cost rate against activities in one or more Tasks, waiver of indirect costs assessed against base funds and/or Task I activities, waiver or reduction of any costs associated with the use of facilities at the CI, and full or partial salary funding for the CI director, administrative staff, graduate students, visiting scientists, or postdoctoral scientists.

IV. Application and Submission Information

A. Address to Access Online Application Materials/Request Hard Copy Application Package

Applications submitted in response to this announcement should be submitted through the Grants.gov Web site. All application

materials can be found at the Grants.gov portal: http://www.grants.gov.

If for some reason the applicant has difficulty downloading the required hard copy forms or does not have computer access, he or she should contact Dr. John Cortinas, 1315 East West Highway, Room 11554, Silver Spring, Md. 20910 telephone 301-713-9397 x 206, e-mail: John.Cortinas@noaa.gov.

B. Content and Form of Application Submission

Proposals must adhere to the provisions under "Proposals" and the requirements under "Required Elements" in this section by the deadline of September 18, 2006.

i. Proposals

a. Proposals must include elements requested on the Grants.gov portal. If a hard copy application is submitted, NOAA requests that the original and two unbound copies of the proposal be included.

b. Proposals, electronic or paper, should be no more than 75 pages (numbered) in length, excluding budget, investigators vitae, and all appendices. Federally mandated forms are not included within the page count. Facsimile transmissions and electronic mail submission of full proposals will not be accepted.

ii. Required Elements

Failure to include the following elements will result in proposals being returned to the submitter without review:

a. Signed title page. The title page should be signed (electronically or on paper) by the PIs and the institutional representative and should clearly indicate which project area is being addressed. The PIs and institutional representative should be identified by full name, title, organization, telephone number, and address. The total amount of Federal funds being requested should be listed for the award period.

b. Abstract: An abstract must be included and should contain a brief description of the CI, research themes, and proposed activities. The abstract should appear on a separate page, headed with the proposal title, institution's investigators, total proposed cost, and budget period.

c. Results from prior research. The results of related projects supported by NOAA and other agencies should be described, including their relation to the currently proposed work. Reference to each prior research award should include the

title, agency, award number, PIs, period of award, and total award. The section should be a brief summary and should not exceed two pages.

d. Project Description. The information provided in this section will be used to evaluate the proposal according to NOAA's standard evaluation criteria described in Section V. The project description includes several sections: (1) a description of the goals for the CI, (2) a description of the four research themes, (3) a description of the graduate degree program and other education and outreach activities, (4) a business plan, and(5) proposed performance measures for the five-year award. .

The Goals section should clearly describe the mission and vision of the CI, and what the CI expects to accomplish during the award. The Theme section includes information that will help NOAA determine the quality of the CI's capabilities and the expertise at the CI needed to conduct outstanding research in each of the four scientific themes described in Section I.B. This section also includes project descriptions of research projects that will or could be conducted by the CI under each theme (or combination of themes) if sufficient funding during the five-year award is provided.

The Education section should describe the NOAA-related degrees programs that are offered at the CI's institutions, including terminal degrees in these programs. This section should also describe how the CI will integrate students and post-docs into the research projects at the CI.

The Business plan should be a well-developed plan that includes fiscal and human resource management as well as strategic planning and accountability. It must describe the organizational structure of the CI, how it will operate, the responsibilities of the participants from multiple institutions, and how the CI will use the Executive Council and Council of Fellows described in the CI Interim Handbook (available at http://www.nrc.noaa.gov/ci). The business plan must describe how the CI chooses projects, reviews its progress, as well as how the CI will support enhanced communication and collaborations with NOAA.

The Performance Measures section must include proposed measures to be used by NOAA and the CI to measure progress on projects and the overall performance of the CI. After the award is made, NOAA will work with the CI to finalize a set of performance measures that are acceptable to the CI and NOAA.

Immediately after the CI award has been established, the CI must consult with OAR CI Program Manager and produce an annual research plan that provides specific information about the

research projects described in the Themes section that will be accomplished during the first year. The plan will be developed after consultations with NOAA programs that will provide project funding to the CI. This plan must state the goals and objectives of each project, along with a description of the research that the CI expects to accomplish and a detailed budget for these projects. CI funding for the projects described in this plan will be released upon NOAA's approval of the plan. Funding for subsequent years of the award will require additional annual plans.

e. Budget. Applicants must submit a Standard Form 424 "Application for Federal Assistance," including a detailed budget using the Standard Form 424A, "Budget Information--Non-Construction Programs." These and other forms are provided in the Grants.gov application package. The proposal must include total and annual budgets corresponding to the descriptions provided in the project description. Annual and total budgets should be stratified by Task and Institution, particularly if the CI has proposed a reduced indirect cost rate for certain Tasks. Beyond the first year budget (which is associated with the activities described in the annual science plan), NOAA uses the proposal budgets in years 2-5 to establish a funding limit provided by NOAA during the entire award. Funding for years 2-5 will be provided only after approval by the NOAA grants officer of an annual science plan or any other proposal submitted to NOAA that includes a detailed budget. For the Great Lakes CI, proposals should provide an annual budget not to exceed $5,000,000 in years 1-5. While this level is funding is not guaranteed, this amount will allow for the possibility of funding for projects that were not originally planned for the CI. A budget justification should include information described in the budget guidelines provided in the Grants.gov application package.

f. Vitae. Abbreviated curriculum vitae are sought with each proposal. Reference lists should be limited to all publications in the last 3 years with up to five other relevant papers.

g. Current and pending support. For each investigator, submit a list which includes project title, supporting agency with grant number, investigator months, dollar value, and duration. Requested values should be listed for pending support.

C. Submission Dates and Times

The deadline for receipt of proposals at the NOAA/OAR office is 5 p.m., ET, September 18, 2006. Proposals received after the deadline will not be considered. NOAA uses information from Grants.gov to determine whether an application has been submitted

before the deadline. Hard copy applications will be date/time stamped as they are physically received in the NOAA/OAR office.

D. Intergovernmental Review

Applications under this program are not subject to Executive Order 12372, "Intergovernmental Review of Federal Programs."

E. Funding Restrictions

No special restrictions apply.

F. Other Submission Requirements

Universal Identifier- Applicants should be aware that they are required to provide a Dun and Bradstreet Data Universal Numbering System (DUNS) number during the application process. See the October 30, 2002 Federal Register, Vol. 67, No. 210, pp. 66177-66178 for additional information. Organizations can receive a DUNS number at no cost by calling the dedicated toll-free DUNS Number request line at 1-866-705-5711 or via the internet (http://www.dunandbradstreet.com).

All applicants are strongly encouraged to submit proposals through the Grants.gov portal. If unable to do this, hard copy proposals will be accepted. Facsimile transmissions and electronic mail submission of proposals will not be accepted. The hard copies may be submitted by postal mail, commercial delivery service, or hand-delivery. Proposals must be submitted to: NOAA/OAR, 1315 East West Highway, Room 11152, Silver Spring, MD 20910 Attn: Dr. John Cortinas.

V. Application Review Information

A. Evaluation Criteria for Projects. Proposals will be evaluated using the standard NOAA evaluation criteria. Various questions under each criterion are included to ensure that the applicant includes information that NOAA will consider important during the evaluation, in addition to any other information provided by the applicant.

i. Importance and/or relevance and applicability of proposed project to the program goals (25 percent): This ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, Federal, regional, State, or local activities.

- Does the proposal includes research goals and projects

that address the critical issues identified in NOAA's 5-year Research Plan, NOAA's Strategic Plan, and the priorities described in the program activities and needs section ?

- Is there a demonstrated commitment (in terms of resources and facilities) to enhance existing NOAA and CI resources to foster a long-term collaborative research environment/culture?

- Is there a strong education program with established graduate degree programs in NOAA-related sciences that also encourage student participation in NOAA-related research studies?

- Will most of the staff at the CI be located near a NOAA facility, particularly the Great Lakes Environmental Research Laboratory in Ann Arbor, Michigan, to enhance collaborations with NOAA?

ii. Technical/scientific merit (30 percent): This assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals and objectives.

- Does the project description include a summary of clearly stated goals to be achieved during the five-year period that reflect NOAA's strategic plan and goals?

- Does the CI involve partnerships with other universities or research institutions, including Minority Serving Institutions and universities with strong departments that can contribute to the proposed activities of the CI?

iii. Overall qualifications of applicants (30 percent): This ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project.

- If the institution(s) and/or principal investigators have received current or recent NOAA funding, is there a demonstrated record of outstanding performance working with NOAA scientists on research projects?

- Is there internationally recognized expertise within

the appropriate disciplines needed to conduct the collaborative/interdisciplinary research described in the proposal?

- Is there a well-developed business plan that includes fiscal and human resource management as well as strategic planning and accountability?

- Are there any unique capabilities in a mission-critical area of research for NOAA?

- Has the applicant shown a substantial investment to the NOAA partnership, as demonstrated by the amount of the cost sharing contribution?

iv. Project costs (5 percent): The budget is evaluated to determine if it is realistic and commensurate with the project needs and time-frame.

v. Outreach and education (10 percent): NOAA assesses whether this project provides a focused and effective education and outreach strategy regarding NOAA's mission to protect the Nation's natural resources.

B. Review and Selection Process

An initial administrative review/screening is conducted to determine compliance with requirements/completeness. All proposals will be evaluated and individually ranked in accordance with the assigned weights of the above evaluation criteria by an independent peer panel review. At least three experts, who may be Federal or non-Federal, will be used in this process. If non-Federal experts participate in the review process, each expert will submit an individual review and there will be no consensus opinion. The merit reviewers' ratings are used to produce a rank order of the proposals. The Selection Official selects proposals after considering the peer panel reviews and selection factors listed below. In making the final selections, the Selecting Official will award in rank order unless the proposal is justified to be selected out of rank order based upon one or more of the selection factors.

C. Selection Factors

The merit review ratings shall provide a rank order to the Selecting Official for final funding recommendations. The Selecting Official shall award in the rank order unless the proposal is justified to be selected out of rank order based upon

one or more of the following factors:

i. Availability of funding.
ii. Balance/distribution of funds:
  a. Geographically.
  b. By type of institutions.
  c. By type of partners.
  d. By research areas.
  e. By project types.
iii. Whether this project duplicates other projects funded or considered for funding by NOAA or other Federal agencies.
iv. Program priorities and policy factors.
v. Applicant's prior award performance.
vi. Partnerships and/or participation of targeted groups.
vii. Adequacy of information necessary for NOAA staff to make a NEPA determination and draft necessary documentation before recommendations for funding are made to the Grants Officer.

D. Anticipated Announcement and Award Dates

Review of the proposals will occur within 45 days of the close of the announcement. July 1, 2007 should be used as the proposed start date on proposals.

VI. Award Administration Information

A. Award Notices

The notice of award is signed by the NOAA Grants Officer and is the authorizing document. It is provided by electronic notification or postal mail to the appropriate business office of the recipient organization. NOAA/OAR will notify unsuccessful applicants electronically or in writing by postal mail. Those proposals that are not ultimately selected for funding will be destroyed.

B. Administrative and National Policy Requirements

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register notice of December 30, 2004 (69 FR 78389), are applicable to this solicitation.

C. Limitation of Liability

Funding for years 2-5 of the Cooperative Institute is contingent

upon the availability of funding. In no event will NOAA or the Department of Commerce be responsible for application preparation costs if these programs fail to receive funding or are cancelled because of other agency priorities. Publication of this announcement does not oblige NOAA to award any specific project or to obligate any available funds.

D. National Environmental Policy Act (NEPA)

NOAA must analyze the potential environmental impacts, as required by the National Environmental Policy Act (NEPA), for applicant projects or proposals which are seeking NOAA federal funding opportunities. Detailed information on NOAA compliance with NEPA can be found at NOAA's NEPA website, http://www.nepa.noaa.gov/, and the Council on Environmental Quality implementation regulations, http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm.

Consequently, as part of an applicant's package, and under their description of their program activities, applicants are required to provide detailed information on the activities to be conducted, locations, sites, species and habitat to be affected, possible construction activities, and any environmental concerns that may exist (e.g., the use and disposal of hazardous or toxic chemicals, introduction of non-indigenous species, impacts to endangered and threatened species, aquaculture projects, and impacts to coral reef systems). In addition to providing specific information that will serve as the basis for any required impact analyses, applicants may also be requested to assist NOAA in drafting of an environmental assessment, if NOAA determines an assessment is required. Applicants will also be required to cooperate with NOAA in identifying feasible measures to reduce or avoid any identified adverse environmental impacts of their proposal. The failure to do so shall be grounds for not selecting an application. In some cases if additional information is required after an application is selected, funds can be withheld by the Grants Officer under a special award condition requiring the recipient to submit additional environmental compliance information sufficient to enable NOAA to make an assessment on any impacts that a project may have on the environment.

E. Reporting

Financial reports are to be submitted to the NOAA Grants Officer and Performance (technical) reports are to be submitted to the NOAA program officer annually. Near the end of each award year, NOAA will provide the CI with guidance on what information should be submitted as part of the annual performance report. This

information will be used by NOAA to assess the quality of the research and provide NOAA with general information about the quality of activities at the CI, including how many students are participating, scientific output, and number of employees associated with the CI receiving NOAA support. Reports should be submitted electronically through NOAA's Grants Online system or on paper if no computer access is available.

VII. Agency Contact

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